

CLAIMS

What is claimed is:

- 5 1. A method of detecting interactions among objects associated with RFID tags, the method implemented in computer software operating in a services gateway, the services gateway comprising server software installed and operating upon a computer, the method comprising the steps of:
- 10 reading, through an RFID reader, a first RFID identification code from a first RFID tag associated with a first object;
- reading, through the RFID reader, a second RFID identification code from a second RFID tag associated with a second object; and
- 15 inferring from an interactions database an interaction between the objects;
- wherein the interactions database comprises an interactions record representing the interaction between the objects, the interactions record comprising an interaction identification field having a value identifying the
- 20 interaction between the objects and at least two RFID identification fields; and
- wherein the readings of RFID identification codes and the inferring of an interaction are carried out through Java servlets in an OSGI-compliant service
- 25 bundle installed and operating in the service gateway.

2. The method of claim 1 wherein inferring an interaction further comprises finding in the interactions database an interaction record having a first interaction field value equal to the first RFID identification code and a second interaction field value equal to the second RFID identification code.

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3. The method of claim 1 wherein the interactions database comprises a remote database installed and operating upon a computer located remotely from the services gateway and the services gateway is coupled for data communications to the interactions database.

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4. The method of claim 1 wherein the interactions database comprises a local database installed and operating upon the computer upon which the service gateway is installed, and the services gateway is coupled for data communications to the interactions database.

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5. The method of claim 1 further comprising evaluating the inferred interaction in dependence upon risk level.

6. The method of claim 1 further comprising communicating the inferred interaction to a person.

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7. The method of claim 1 further comprising evaluating the inferred interaction in dependence upon risk level and communicating the evaluated inferred interaction to a person.

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8. The method of claim 1 wherein the first object comprises a prescription bottle for a first drug and the second object comprises a prescription bottle for a second drug.
- 5 9. The method of claim 1 comprising the further steps of:
- creating in the interactions database the interaction data record, wherein the interaction data record comprises an interaction identification field having a value;
- 10 storing, on the RFID tags, the value of the interaction identification field;
- reading the RFID identification codes from the RFID tags; and
- 15 storing the RFID identification codes in the RFID identification fields in the interaction data record.
10. The method of claim 9 further comprising receiving an interaction identification value from a source of interaction identification values.
- 20 11. The method of claim 10 wherein the source of interaction identification values is a cash register in a fast food restaurant.
12. The method of claim 9 wherein inferring an interaction is carried out in dependence upon a known interaction identification value.
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13. The method of claim 9 wherein the first object is a first article of manufacture in a manufacturing assembly and the second object is a second article of manufacture in the manufacturing assembly.
- 5 14. The method of claim 9 wherein the first object is a first container for a first fast food item and the second object is a second container for a second fast food item.
- 10 15. The method of claim 9 wherein the first object is a paper wrapper for a cheeseburger and the second object is a plastic cup for a soft drink.

16. A system for detecting interactions among objects associated with RFID tags, the system implemented in computer software operating in a services gateway, the services gateway comprising server software installed and operating upon a computer, the system comprising:

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means for reading, through an RFID reader, a first RFID identification code from a first RFID tag associated with a first object;

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means for reading, through the RFID reader, a second RFID identification code from a second RFID tag associated with a second object; and

means for inferring from an interactions database an interaction between the objects;

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wherein the interactions database comprises an interactions record representing the interaction between the objects, the interactions record comprising an interaction identification field having a value identifying the interaction between the objects and at least two RFID identification fields; and

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wherein the readings of RFID identification codes and the inferring of an interaction are carried out through Java servlets in an OSGI-compliant service bundle installed and operating in the service gateway.

17. The system of claim 16 wherein means for inferring an interaction further comprises means for finding in the interactions database an interaction record having a first interaction field value equal to the first RFID identification code and a second interaction field value equal to the second RFID identification code.
18. The system of claim 16 wherein the interactions database comprises a remote database installed and operating upon a computer located remotely from the services gateway and the services gateway is coupled for data communications to the interactions database.
19. The system of claim 16 wherein the interactions database comprises a local database installed and operating upon the computer upon which the service gateway is installed, and the services gateway is coupled for data communications to the interactions database.
20. The system of claim 16 further comprising means for evaluating the inferred interaction in dependence upon risk level.
21. The system of claim 16 further comprising means for communicating the inferred interaction to a person.
22. The system of claim 16 further comprising means for evaluating the inferred interaction in dependence upon risk level and means for communicating the evaluated inferred interaction to a person.

23. The system of claim 16 wherein the first object comprises a prescription bottle for a first drug and the second object comprises a prescription bottle for a second drug.
- 5 24. The system of claim 16 further comprising:
- means for creating in the interactions database the interaction data record, wherein the interaction data record comprises an interaction identification field having a value;
- 10 means for storing, on the RFID tags, the value of the interaction identification field;
- means for reading the RFID identification codes from the RFID tags; and
- 15 means for storing the RFID identification codes in the RFID identification fields in the interaction data record.
25. The system of claim 24 further comprising means for receiving an interaction identification value from a source of interaction identification values.
- 20 26. The system of claim 25 wherein the source of interaction identification values is a cash register in a fast food restaurant.
- 25 27. The system of claim 24 wherein means for inferring an interaction is carried out in dependence upon a known interaction identification value.

28. The system of claim 24 wherein the first object is a first article of manufacture in a manufacturing assembly and the second object is a second article of manufacture in the manufacturing assembly.
- 5 29. The system of claim 24 wherein the first object is a first container for a first fast food item and the second object is a second container for a second fast food item.
- 10 30. The system of claim 24 wherein the first object is a paper wrapper for a cheeseburger and the second object is a plastic cup for a soft drink.

31. A computer program product for detecting interactions among objects associated with RFID tags, the computer program product implemented in computer software operating in a services gateway, the services gateway comprising server software installed and operating upon a computer, the computer program product comprising:
- 5 a recording medium;
- means, recorded on the recording medium, for reading, through an RFID reader, a first RFID identification code from a first RFID tag associated with a first object;
- 10 means, recorded on the recording medium, for reading, through the RFID reader, a second RFID identification code from a second RFID tag associated with a second object; and
- 15 means, recorded on the recording medium, for inferring from an interactions database an interaction between the objects;
- 20 wherein the interactions database comprises an interactions record representing the interaction between the objects, the interactions record comprising an interaction identification field having a value identifying the interaction between the objects and at least two RFID identification fields; and
- 25 wherein the readings of RFID identification codes and the inferring of an interaction are carried out through Java servlets in an OSGI-compliant service bundle installed and operating in the service gateway.

32. The computer program product of claim 31 wherein means, recorded on the recording medium, for inferring an interaction further comprises means, recorded on the recording medium, for finding in the interactions database an interaction record having a first interaction field value equal to the first RFID identification code and a second interaction field value equal to the second RFID identification code.
33. The computer program product of claim 31 wherein the interactions database comprises a remote database installed and operating upon a computer located remotely from the services gateway and the services gateway is coupled for data communications to the interactions database.
34. The computer program product of claim 31 wherein the interactions database comprises a local database installed and operating upon the computer upon which the service gateway is installed, and the services gateway is coupled for data communications to the interactions database.
35. The computer program product of claim 31 further comprising means, recorded on the recording medium, for evaluating the inferred interaction in dependence upon risk level.
36. The computer program product of claim 31 further comprising means, recorded on the recording medium, for communicating the inferred interaction to a person.

37. The computer program product of claim 31 further comprising means,
recorded on the recording medium, for evaluating the inferred interaction in
dependence upon risk level and means for communicating the evaluated
inferred interaction to a person.
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38. The computer program product of claim 31 wherein the first object comprises
a prescription bottle for a first drug and the second object comprises a
prescription bottle for a second drug.
- 10 39. The computer program product of claim 31 further comprising:
- means, recorded on the recording medium, for creating in the interactions
database the interaction data record, wherein the interaction data record
comprises an interaction identification field having a value;
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- means, recorded on the recording medium, for storing, on the RFID tags, the
value of the interaction identification field;
- means, recorded on the recording medium, for reading the RFID identification
20 codes from the RFID tags; and
- means, recorded on the recording medium, for storing the RFID identification
codes in the RFID identification fields in the interaction data record.
- 25 40. The computer program product of claim 39 further comprising means,
recorded on the recording medium, for receiving an interaction identification
value from a source of interaction identification values.

41. The computer program product of claim 40 wherein the source of interaction identification values is a cash register in a fast food restaurant.
- 5 42. The computer program product of claim 39 wherein means, recorded on the recording medium, for inferring an interaction is carried out in dependence upon a known interaction identification value.
- 10 43. The computer program product of claim 39 wherein the first object is a first article of manufacture in a manufacturing assembly and the second object is a second article of manufacture in the manufacturing assembly.
- 15 44. The computer program product of claim 39 wherein the first object is a first container for a first fast food item and the second object is a second container for a second fast food item.
- 20 45. The computer program product of claim 39 wherein the first object is a paper wrapper for a cheeseburger and the second object is a plastic cup for a soft drink.